What is claimed is:

1. A device for the separation of particles and at least one target substance from a particle-laden liquid feed comprising:

(a) a housing having a liquid feed inlet and a permeate outlet; and

(b) at least two adjacent porous adsorption membrane layers sealed fluid-tight in their peripheries and spaced apart from each other and having at least one aperture in each layer, with each aperture sized so as to permit the passage of particles present in a liquid feed containing at least one target substance.

2. The device of claim 1 wherein said membrane layers carry at least one group capable of binding at least one of said at least one target substance and selected from the group consisting of a functional group, a ligand and an ion exchange site.

3. The device of claim 1 including at least one spacer between said at least two adjacent membrane layers.

4. The device of claim 3 wherein said adjacent membrane layers are substantially parallel to each other.

5. The device of claim 4 wherein said adjacent membrane layers are separated from each other by a distance of from about 0.1 to 5 mm.

6. The device of claim 5 wherein said distance is from about 0.2 to about 1.0 mm.

7. The device of claim 3 wherein said at least one spacer comprises a material selected from the group

consisting of a web, a mesh, a woven material and matting.

8. The device of claim 1 wherein said at least one aperture in said at least two adjacent membrane layers are offset from each other.

9. The device of claim 1 wherein said at least one aperture takes up an area of up to about 20% of the surface area of said at least two membrane layers.

10. The device of claim 9 wherein said area is from about 2 to about 4%.

11. The device of claim 1 wherein the shape of said at least one aperture is selected from a slot and a circle.

12. The device of claim 11 wherein said at least one aperture is in the shape of a circle and its diameter is from about 0.01 to about 20 mm.

13. The device of claim 12 wherein said diameter is from about 0.5 to about 2 mm.

14. The device of claim 1 wherein said membrane layers are spiral wound.

15. The device of claim 14 wherein said membrane layers are enclosed within a module.

16. The device of claim 1 wherein said membrane layers have a pore diameter ranging from about 0.1 to about 10 μm.

17. The device of claim 16 wherein said pore diameter is from about 3 to about 5 μm.

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